Gadsman

IC2020

USER MANUAL

Installation

Programming

Operating

02-April-2010

For INSTANT CARE

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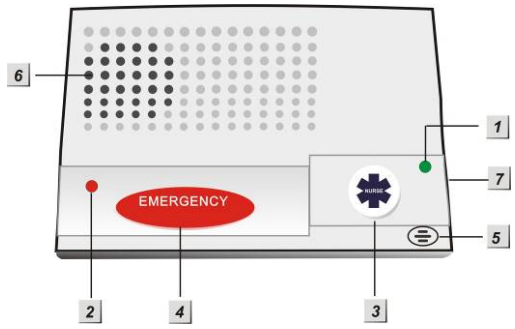
1. Application Overview

1.1. Identifying The Parts

TOP VIEW



1 **GREEN LED**

- ON: AC Power is ON.
- FLASH every second: AC Power failure
- FLASH every 2 seconds: Panel or Device Low battery
- QUICK FLASH every 2 seconds: Supervision failure

2 **RED LED**

- ON: Off-hook / Waiting retry pause / Ready to enter Programming Mode (before entering PIN code)
- FLASH: Programming Mode / Pendant Learning Mode
- FLASHing 3 times every 3 seconds indicates telephone line failure

3 **WHITE NURSE BUTTON**

- Press once in normal mode to reset mobility timer (see command 44)
- Before IC2020 dials out for alarm reporting, press once to cancel the alarm reporting
- During or at-the-end of conversation, press once to terminate two-way voice communication
- In Programming Mode, press once to return to Idle Mode
- Press & hold for 3~15 sec: dial the Nurse line
- Press & hold for 20 sec: delay line failure prompt

4 **RED EMERGENCY BUTTON (with backlight)**

- Back-lit disigned for easy access at night
- Backlight illuminates when off-hook
- Backlight flashes during the waiting period until help arrives
- Press once in normal mode: dial the Emergency line and send an Emergency alarm report to the Monitoring Station

<NOTE>

☞ Press Nurse & Emergency Button and hold these two buttons for 6 secs to enter to Learn mode.

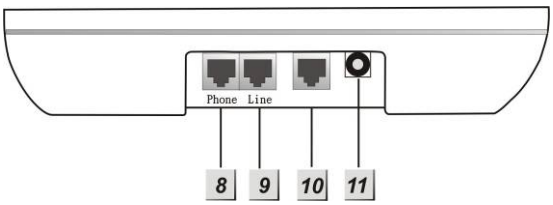
5 **Microphone**

6 **Speaker**

7 **8-Level Volume Control for Nurse Line (30 % to 100%)**

- Adjustable during Nurse call only; ineffective for Emergency call
- Volume level stays at where left off in the previous Nurse call
- Push toward + to raise the volume
- Push toward - to lower the volume

REAR VIEW



8 **Phone Jack marked** ☎

- Telephone unit connection

9 **Line Jack marked**

- Phone line connection from wall

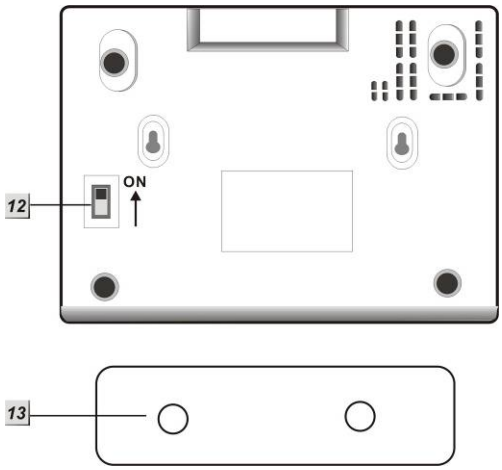
10 **Local Programming Telephone Jack marked**

- A standard telephone set can be plug into this jack for Local Programming

11 **DC Jack**

— DC 12 V 500 mA switching power

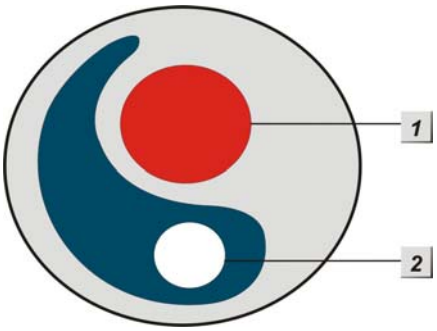
BACK VIEW



12 **Rechargeable Battery Switch Rubber Cap**

13 **Mounting Bracket**

REMOTE OVERVIEW (IC2020TX)



1 **Emergency Button/LED (Red/Red)**

— Press once to dial the Emergency line and send an Emergency alarm report to the Monitoring Station.

— Press & hold for 15 sec: activate Auto Low Battery Detection

— Red Light ON: Signal transmitted

— Red Light FLASH: Signal trasmitted & Low Battery

2 **Nurse Button/LED (White/Blue)**

— Press once on the Nurse Button to dial the Nurse line.

— Press and hold the Nurse button for 5 sec to activate/deactivate Panic Alarm. The White button will light up steadily in Blue for 1 sec after the button is released.

— Blue Light ON: Signal transmitted

— Blue Light FLASH: Signal trasmitted & Low Battery

For detailed usage of the Remote, please refer to the separate user manual *Remote (IC2020TX)*.

1.2. The Power Supply

- An AC power adapter is required to connect to a wall outlet. Be sure only to use an adapter with the appropriate AC voltage rating to prevent component damage. A DC 12 V output and 500 mA switching power is generally used to power IC2020.
- In addition to the adapter, there is a rechargeable battery inside IC2020, which serves as a back-up in case of a power failure.
- The battery used is a Ni-MH 600 mA and 7.2 V rechargeable battery.
- During normal operation, the AC power adapter is used to supply power to IC2020 and at the same time recharge the battery.
- When the battery is fully charged, it serves as a back-up power source for a period of at least 30 hours. It takes approximately 48 hours to fully charge the battery.
- The battery can be manually disconnected by the battery switch located at the bottom (covered with a rubber cap).
- Battery Switch is set as **ON** by factory default. If switched to **OFF**, the battery will not be charged when AC power is connected, nor will it serve as a back-up power source when AC power is missing.

<NOTE>

☞ Please make sure the battery switch is slid back to ON position (as marked) after manually disconnected the rechargable battery.

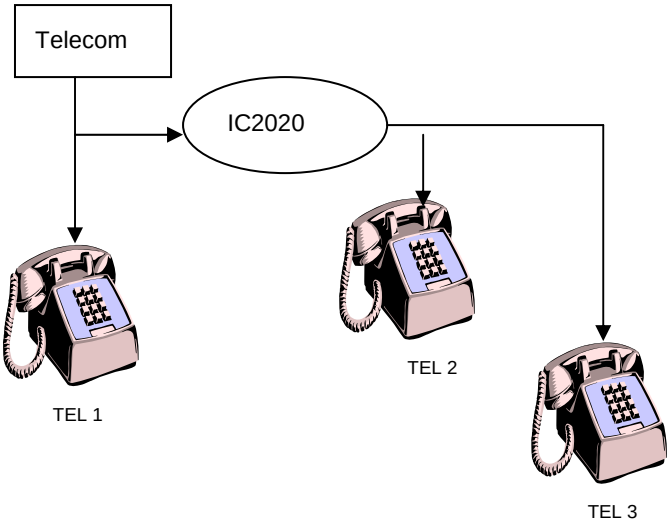
1.3. Line Capture

- IC2020 features **Master Control** over the telephone line. That means, even if the phone line is engaged, the IC2020 has the power to circumvent the line and dial-out anyway.

<NOTE>

☞ The Line Capture feature is only available when household phones are connected after the IC2020 wiring.

For Example:



IC2020 has the Line Capture function over TEL #2 and TEL #3, but not TEL #1.

1.4. Line Failure Detection

- IC2020 is able to automatically detect if the telephone line is installed properly.
- Line failure detection starts after IC2020 is powered on for one minuite, and repeats every 15 sec thereafter.
- If line failure is detected, IC2020 will respond as 4 steps illustructed below:

  1. If line faliure lasts over 10 minuites, IC2020 will emit a beep sound and the Red LED will flash 3 times every 3 seconds.

  2. If line failure lasts under 10 minutes and either Emergency or Nurse button is pressed, IC2020 will emit a vocie prompt "**Phone line troulble**" and the Red LED will flash 3 times every 3 secounds.

  3. The voice promot "Phone line trouble" will be repeated as defined by Command 53 (please refer to section ***3.2. Programming Your IC2020***)

  4. If you hold the Nurse button for 20 seconds, a long beep will be heared and then release the Nurse Button. The repearting cycle of voice prompt "**Phone line trouble**" will be reset into 6 hours.

- During the line failure period, if the Emergency or Nurse button is pressed or any sensor is triggered, the red LED will flash 3 times every 3 seconds and the voice prompt "**Phone line trouble**" will be played. The reporting will then be made after the line failure is restored.
- If line failure is detected and the device low battery reporting has been previously made before the line failure period, then no more device low battery reporting will be made after the line failure is restored. However, if the device low battery condition is first detected during the line failure period, then a device low battery reporting will be made after the line failure is restored.
- During the reporting period after line failure restore (if the Emergency or Nurse button is pressed or any sensor is triggered during the line failure period), line failure detection will be temporarily stopped.
- Once line failure is restored for one minute or more, the red LED will dim and the voice prompt will also be stopped. If line failure happens again, it will repeat step 1 to step 4 as illustructed in the item 3 of **1.4 Line Failure Detection**.
- Line failure and restore will not be reported.
- At least one telephone and account # must exist in order for line failure detection to start. Line failure detection will not start if no telephone nor account # exist (even after powered on for one minute).

1.5. How to install the Control Panel

Locating a suitable position for the Control Panel

- The Control Panel requires main power and a constant telephone connection.
- The Control Panel should be easily accessible.
- The Control Panel should not be placed in a damp location, such as a bathroom.
- The Control Panel should not be placed close to any heat source, such as microwave ovens, which can reduce signal strength.
- The Control Panel should not be located alongside other radio transmitting devices, such as mobile phones, cordless phone, or wireless computer network (Wi-Fi) devices.
- Important: When drilling into a wall, ensure there are no hidden cables or pipes.

Mounting the Control Panel

The Control Panel can be mounted on the wall or wherever desired (e.g. on the table). Ensure the Control Panel is fitted at approximately chest height where the buttons, microphone, and speaker can be easily accessed and operated.

- Use the 2 holes of the Wall Mounting Bracket as a template, mark off the holes' positions.
- Drill 2 holes and insert the wall plugs if fixing into plaster or brick.
- Screw the base to the wall.
- Hook the Control unit onto the Wall Mounting Bracket (holding the unit with the front facing you).

2. Learn-in the Devices

There are 2 Methods to learn in the device:

1. Using the Learning Mode, you can learn in Pendant #1 and Pendant #2.
2. Use Command #91 - #94 in Programming mode, you can learn in up to 10 devices including PIR Sensor, Smoke Detector, Panic Button, Carbon Monoxide, Wrist & Neck Transmitter, Water Sensor, and Pendant Transmitter. Please refer to section ***3.2 Programming Your IC2020: Commands 91-94***.

● Learning Mode:

Learning Mode is only used to learn and remove Pendant #1 & Pendant #2 for IC2020.

2.1. Learning Pendant #1:

Step 1. Press the Nurse & Emergency Button and hold these two buttons for 6 secs to enter to Learn mode

Step 2. Once pressed, a button beep sound will be heard. IC2020 will emit 2 beeps when it reaches 6 sec.

Step 3. Release the button after you heard the ***double beep***. Then, IC2020 is now in **Learning Mode**. The **RED LED** begins to flash.

Step 4. Press both the **NURSE** and **Pendant #1** buttons simultaneously until IC2020 emits a double-beep to indicate that the Pendant #1 has been learnt-in successfully.

<NOTE>

☞ It is prohibited to learn-in the same Pendant twice (IC2020 will emit a long beep instead of double-beeps).

☞ Users can replace the learnt-in Pendant in IC2020 with anohter Pendant. The previous learnt-in Pendant will become unfunctional.

Step 5. Carry the Pendant & walk around your house. Press the **Pendant button** as you move and observe the maximum range for its operation.

If IC2020 responds with one long beep, the Pendent is within the operation range.

If no signal is received within 30 sec, IC2020 will exit Learning mode.

Step 6. If there is a 2nd Pendant (Pendant #2) wished to be learnt-in, proceed to Steps 3 - 5 under the section **Learning Pendant #2**.

Step 7. Otherwise, press both **NURSE & EMERGENCY** buttons at the same time to exit Learning Mode.

Or, if no signal is received within 30 sec, IC2020 will exit Learning mode.

IC2020 will emit a short beep and the Red LED turns off to indicate the system is back to Idle mode.

2.2. Learning Pendant #2:

Step 1. Press the Nurse & Emergency Button and hold these two buttons for 6 secs to enter to the Learn mode

Step 2. Once pressed, a button beep sound will be heard. IC2020 will emit 2 beeps when it reaches 6 sec.

Step 3. Release the button after you heard the ***double beep***. Then, IC2020 is now in **Learning Mode**. The **RED LED** begins to flash.

Step 4. Press both the **EMERGENCY** and **Pendant #2** buttons simultaneously until IC2020 emits a double-beep to indicate that the Pendant #2 has been learned-in successfully.

<NOTE>

☞ It is prohibited to learn-in the same Pendant twice (IC2020 will emit a long beep instead of double-beeps).

☞ User can replace the learnt-in Pendant in IC2020 with another Pendant. The previous learnt-in Pendant will become unfunctional.

Step 5. Carry the Pendant & walk around your house. Press the **Pendant button** as you move and observe the maximum range for its operation.

If IC2020 responds with one long beep, the Pendent is within the operation range.

If no signal is received within 30 sec, IC2020 will exit Learning mode.

Step 6. Press both **NURSE & EMERGENCY** buttons at the same time to exit Learning Mode.

Or, if no signal is received within 30 sec, IC2020 will exit Learning mode.

IC2020 will emit a short beep and the LED turns off to indicate the system is back to Idle mode.

3. System Configuration

3.1. Entering Programming Mode

Three IC2020 programming modes are available: Local Programming Mode, Remote Programming Mode, and via CTC-835 Handheld Programmer (sold separately).

3.1.1. Local Programming Mode

From Idle mode, follow the steps below to enter Local Programming mode.

Step 1. **Plug in the telephone set** into **LOCAL PROGRAMMING** jack located on the rear side of IC2020.

Step 2. Pick up the handset.

RED LED lights up.

Step 3. **Enter default ACCESS CODE, 1111** followed by **#**.

Step 4. IC2020 will emit 2 short beeps and the red LED starts to flash, indicating it is in **Programming Mode.**

Step 5. Proceed to program system by referring to the Commands in section ***3.2 Programming Your IC2020***.

<NOTE>

- ☞ Local programming is prohibited when AC Power fails.
- ☞ The first digit of Access Code must be entered within 15 seconds, otherwise IC2020 will exit automatically.
- ☞ Failure to enter the correct Access Code within 2 minutes will cause IC2020 to exit the Programming mode automatically.
- ☞ To exit Programming mode, enter **99** followed by **#**, or place the handset on hook, or disconnect the Programming telephone set.

3.1.2. Remote Programming Mode

To allow Remote Programming, there are two options for IC2020 to answer the incoming calls.

(1) Auto Answering by ring count

(2) Dial in twice (Ring Count disable)

The two options are set by Command #41. Please refer to **Command 41** under section ***3.2 Programming your IC2020***.

3.1.2.1. Auto Answering by Ring Count

By using Command 41, you can set the number of rings for IC2020 to answer (**20-Rings** is set as factory default).

Step 1. Dial IC2020 and wait for IC2020 to answer.

Step 2. Enter **1111** (default 4-digit Access Code) followed by **#**, via the phone set.

Step 3. IC2020 will respond with two quick beeps to indicate it is ready for Remote Programming. The RED LED will flash as a visual indication.

Step 4. You are now in **Programming Mode**. Proceed to program by referring to the Command in section ***3.2 Programming Your IC2020***.

3.1.2.2. Dial in Twice (Ring Count Disable)

If **00** is set in Command 41, it means IC2020 is disabled to auto answer the incoming calls by ring count. If Remote programming is required, you will need to call IC2020 twice.

Step 1. Dial IC2020 and hang up after first 2 rings, wait for another 8-20 sec then call again. IC2020 will answer the call on the first ring. You will enter the Remote Programming Mode after the first ring from the 2nd call.

Step 2. Enter **1111** (the default 4-digit Access Code) followed by **#**, via the phone set.

Step 3. IC2020 will respond with two quick beeps to indicate it is ready for Remote Programming Commands. The RED LED will flash as a visual indication.

Step 4. You are now in **Programming Mode**. Proceed to program by referring to the Command in section ***3.2 Programming Your IC2020***.

<NOTE>

- ☞ The first digit of Access Code must be entered within 15 seconds, otherwise the IC2020 will exit automatically.
- ☞ Failure to enter the correct Access Code within 2 minutes will cause IC2020 to exit the Programming mode automatically.
- ☞ To exit Remote Programming mode, enter **99** followed by **#**.

3.1.3. CTC-835 Programmer

CTC-835 is a powerful local & remote handheld programming tool (sold separetely) that features a built-in keypad and LCD display to help you to program the medical alarm panels effeciently and conveniently. It also features **Once-for-All Uploading**, which allows you program on a computer via the supplied **Pilot** software and you can then upload all the settings to the medical alarm panel simultaneously with a single mouse click.

For detailed usages, please refer to the Operation Manual of CTC-835 Programmer.

3.2. Programming Your IC2020

- **How to enter Commands?**

Please make sure IC2020 is in Programming Mode (RED LED flashes continuously) before trying any IC2020 Command Functions. Please refer to section *System Configuration, Entering Programming Mode*.

- **Follow the protocol below to command the IC2020:**

CC	#	DTMF ACK	Function Selection	#	DTMF ACK
1.	2.	3.	4.	5.	6.

1. **CC** = 2-digit DTMF Command
2. # = Termination of the DTMF Command
3. **ACK** = **DTMF Command Acknowledgement** from IC2020

   Short beep: Command succeeded

   Long beep: Command failed
4. **Function Selection** = According to different Command you will have different entering in this part, e.g. Tel. Number, Account number, etc.
5. **# =** Terminates Function Selection
6. **ACK** = Function Selection **Acknowledgement** from IC2020

   Short beep: Function Selection succeeded

   Long beep: Function Selection failed

- **Follow the Command Steps to program your IC2020:**

Step 1. Enter Command number (DTMF Numeric Command, ex. (**01**), (**02**)…)

Step 2. Press (#) to terminate the DTMF Command.

Step 3. One short beep will be heard for successful Command entry.

Step 4. Enter the desired Command function number.

Step 5. Enter (#) to terminate the Command Operation.

Step 6. IC2020 will emit a short beep, indicating successful programming.

- The maximum interval between key strokes is 2 minutes. Otherwise, commands will be ignored and IC2020 will automatically exit to Idle Mode.
- Any erroneous programming must be rectified and program again correctly.

Command 01-04

Telephone Number Programming

- Used to program the 1st - 4th Tel. numbers respectively.
- The default Tel. numbers have been pre-programmed as follow:

Command	Tel. Number
Command 01	18888523842
Command 02	18888524098
Command 03	18662715821
Command 04	No number

- To program the 1st Tel. number: enter (**01**) followed by (#). After one short beep, enter (**telephone number**) followed by (#). The 1st Tel. number is programmed successfully.
- Likewise, the 2nd, 3rd or 4th Tel. numbers can be programmed using Command (**02**), (**03**) or (**04**) respectively.

<NOTE>

☞ When entering the phone number, entering (✱) represent a 3-sec. pause. (ex. Switchboard system, extension, etc.)

☞ Up to 20 digits including (✱) are allowed for each telephone number.

Delete Telephone Number：

- To delete the 1st Tel. number, enter (**01**) followed by (#), after one short beep, enter another (#). IC2020 will emit another short beep, signaling the 1st Tel. number is erased.
- Likewise, you can erase the respective 2nd, 3rd or 4th Tel. Numbers, by following the above procedure.

Command 05-06

Select Telephone Number for Alarm Reporting and Status Reporting

<IMPORTANT NOTE>

If the Tel. number is selected in Commands #5, #6 and #7, then Command #7 holds the top priority to overwrite the setting. The Tel. number selected in Command #7 will not be used for alarm and/or status reporting,

- **Command (05):** Select which telephone number (1-4) is/are to be used for **Alarm Reporting**.
- **Command (06):** Select which telephone number (1-4) is/are to be used for **Status Reporting**.
- Available Key-in options:

Tel. Number	Function Selection Sequence
1st Tel. #	**(1)**
2nd Tel. #	**(2)**
3rd Tel. #	**(3)**
4th Tel. #	**(4)**
1st & 2nd Tel. #s	**(12)**
1st & 3rd Tel. #s	**(13)**
1st & 4th Tel. #s	**(14)**
2nd & 3rd Tel. #s	**(23)**
2nd & 4th Tel. #s	**(24)**
3rd & 4th Tel. #s	**(34)**
1st, 2nd & 3rd Tel. #s	**(123)**
1st, 2nd & 4th Tel. #s	**(124)**
1st , 3rd & 4th Tel. #s	**(134)**
2nd, 3rd & 4th Tel. #s	**(234)**
1st, 2nd, 3rd & 4th Tel. #s	**(1234)**

- Factory Default for **Alarm Reporting** is set as (**1**), **1st Tel. #**.
- Factory Default for **Status Reporting** is set as (**2**), **2nd Tel. #.**

<NOTE>

☞ The Tel. number selected in Command #7 will not be used for alarm and/or status reporting, even if it is selected in command #5 and/or #6.

☞ When multiple Tel. numbers are selected, the IC2020 will always dial in respective programmed order.

☞ The latest Command (**05-06**) setting(s) will overwrite any previously enter setting(s).

Command 07

Select Telephone Number for Nurse call

- This command is used to select which telephone number will be used for Nurse call.
- The selected Tel. number will not be used for alarm and/or status reporting, even if it is selected in command #5 and/or #6.
- Available key-in options:

Tel. Number	Function Selection Sequence
Disable	**(0)**
1st Tel. #	**(1)**
2nd Tel. #	**(2)**
3rd Tel. #	**(3)**
4th Tel. #	**(4)**

- Factory default is set as (**3**), **3rd Tel. #**. Alarm will be reported to 1st Tel. number, and Status will be reported to 2nd Tel. number.
- Please refer to section 4.1.2 for more information.

Command 08

Retry Method

- This command is to program the preferred sequenced/method used for reporting.
- Available key-in options:

Retry Method	Function Selection
Alternative	**(0)**
On-by-One	**(1)**

- Factory default is set as (**0**), **Alternative**.

<NOTE>

☞ If the **Alternative** method is chosen, the system will try reporting sequence in cycle of each Tel. number. A max of 5 cycles will be tried.

TEL#1→TEL#2→TEL#3→TEL#4… and repeat for 5 cycles.

☞ If **One by one** method is chosen, the system will try each Tel. number to a max of 5 times before moving onto the next priority.

TEL #1 1st time→…→TEL #1 5th time
TEL #2 1st time→…→TEL #2 5th time
TEL #3 1st time→…→TEL #3 5th time
TEL #4 1st time→…→TEL #4 5th time

Command 10-14

Account Number Programming

- Commands (**10-14**) are used to set the account number for the telephone numbers used for Digital Reporting.
- Command (**10**): Set the **same** account number for **all** telephone numbers.
- Command (**11-14**): Set the account numbers for the 1st-4th Tel. numbers used for Digital Reporting **respectively.**
- In (**Function Selection**) key in **4 or 6 digit Account Number**.
- **Global account number** is pre-programmed when shipped for all 4 Tel. numbers. Each unit possesses a unique account number.
- When the unit is reset to factory default, this pre-programmed account number will

be cleared. You will need to obtain the unique account number from the Central Monitoring Station and re-program.

Command 20-24

Reporting Method

- Commands (**20-24**) are used to program the Alarm reporting method for each Tel. Number.
- Command (**20**)**:** Program the same alarm reporting method for **all** 4 Tel. Numbers.
- Command (**21-24**)**:** Program the alarm reporting method for the 1st-4th Tel. Numbers **respectively.**
- Available Options:

Method	Function Selection	
Digital Reporting Method	**(0)**	**Contact ID**
	(1)	**Scancom**
	(2)	**Tunstall**
Voice Message Reporting Method	**(3)**	**Play Voice Message**
Speech Method	**(4)**	**Open Two-way communication**

- Factory Default for **1st (Command 21)**, **2nd (Command 22)**, and **4th (Command 24) Tel. #** is set as (**0**), **Contact ID**.
- Factory Default for **3rd (Command 23) Tel. #** is set as (**4**), **Speech Method**.

<NOTE>

☞ The latest Command (**20-24**) setting(s) will overwrite any previously entered setting(s).

☞ **If any of Digital Reporting Methods is selected:**

Once alarm or emergency data is successfully transmitted, IC2020 will automatically enter specific Follow-On and/or Call Back Mode as specified by Command (**38**).

☞ **If Voice Message Reporting Methode is selected:**

After the dialing for alarm/emergency trigger is successful, IC2020 will play the pre-recorded message (see Command #50) up to a max. length of 40 seconds. IC2020 will emit a beep via the telephone handset, signaling 20 & 10 sec of time remaining to alert the call Recipient.

While playing the voice message, pressing the DTMF key can enter the following mode for 10 minutes:

- ◆ DTMF #1: enter Talk mode (only the Call Recipient talks).
- ◆ DTMF #2: enter two-way communication mode.
- ◆ DTMF #3: enter listen-in mode.

During the 10 min period, IC2020 will emit a beep via the telephone handset signaling 20 & 10 sec of time remaining to alert to the call Recipient. If the Call Recipient needs more conversation time, press the DTMF key (1, 2 or 3) again to add another 10 minutes.

To terminate the call, press DTMF (**9**) or **NURSE button** on IC2020. IC2020 will start a 10-minute waiting period to auto answer any incoming phone call.

During the voice message playing period, if there is no any DTMF key pressed, the call will automatically hang-up and be recorded as an unsuccessful call. It will retry up to a maximum of 4 times on each Tel. Number accordingly.

☞ **If Speech Method is selected:**

After the dialing for alarm/emergency trigger is successful, IC2020 opens a two-way voice communication between the Call Recipient and IC2020 for 1-60 minutes (set by Command #46).

If the Call Recipient needs more talk time, s/he can press any keys except 9 on their phone set to add another 1-60 minutes (set by Command #46).

To terminate the call, press (**9**) or

NURSE button on IC2020.

During the Speech period, IC2020 will emit two beeps via the telephone handset to alert the call recipient the remaining time of 20 & 10 sec.

During the Speech period, if there is no any DTMF command pressed, the call will automatically hang-up and be recorded as an unsuccessful call. It will retry a max of 4 times on each Tel. Number accordingly.

Command 31

Ringer Enable for In-coming Calls

- The IC2020 can be programmed to sound a ring tone as an audio alert or operate silent for an in-coming call:

Function Selection	Result
(0)	**OFF** **(Ring Tone Disable)**
(1)	**ON** **(Ring Tone Enable)**

- Factory Default is set as **(0) OFF**.

<NOTE>

☞ If the function is set to **ON**, you can answer the incoming call by pressing the **RED EMERGENCY BUTTON** or **Pendant Button**.

☞ The time-out period for the incoming call is 30 minutes; during the communication, the IC2020 will emit two beeps via the telephone handset to alert the call recipient the remaining time of 20 & 10 sec. The duration of this time-out period is unchangeable and inextensible.

☞ To terminate the incoming call: (1) press the white NURSE button on IC2020; or, (2) press DTMF #9 from the call recipient's end.

Command 32

Audible Fault Alert

- The IC2020 can be programmed to sound detected and existent Fault Alert Beeps **every 30 sec.**

Function Selection	Result
(0)	**OFF** **(No Warning Beep)**
(1)	**ON** **(With Warning Beep)**

- Factory Default is set as (**0**), **OFF**.
- The fault situation includes Low Battery Fault (for both IC2020 and Devices) and AC Failure.

<NOTE>

☞ Battery back-up time will be shortened if this function is turned on.

Command 33

Help Arrived Signaling

This function is only available for the digital Contact ID reporting method.

- It is used for the Monitoring Center personnel to confirm if the help has arrived for the user or not.
- If Help Arrived Signaling is set to **ON**, once the Alarm Reporting is completed, the RED EMERGENCY BUTTON will start to flash.

  Press the White NURSE Button when the Help arrives, and IC2020 will report to monitoring center and the RED BUTTON will stop flashing.
- If Help Arrived Signaling is set to **OFF**, once the Alarm Reporting is completed, IC2020 will return to idle mode.

Function Selection	Result
(0)	**OFF** **(disable)**
(1)	**ON** **(enable)**

- Factory Default is set as (**0**), **OFF**.

<NOTE>

☞ If the White NURSE Button is not pressed within 15 minutes, IC2020 will send one more **Help Call** report to summon help and inform the Monitoring Center that no help has arrived within the past 15 minutes.

Command 34

Emergency Button Enable

- The RED EMERGENCY BUTTON can be enabled or disabled to send an Emergency alarm report:

Function Selection	Result
(0)	**OFF** **(disable)**
(1)	**ON** **(enable)**

- Factory Default is set as (**1**)**, ON**.

<NOTE>

☞ When this function is programmed as **OFF**, the RED EMERGENCY BUTTON is deactivated.

☞ When this function is programmed as **ON**, the RED EMERGENCY BUTTON is activated. When pressed, it will play a voice prompt "**Bi-Bi-Bi Emergency**" twice, then send an Emergency alarm report to the Monitoring Station.

Command 35

Silent Mode

- IC2020 can be selected to operate in Silent Mode. This will mute all normal operation **warning beeps**, **Guard Time tone**, **key tone** and **ring**.

<NOTE>

☞ In silent mode, the speaker still functions normally for two-way voice communication and voice message playback.

Function Selection	Result
(0)	**ON** **(Silent)**
(1)	**OFF** **(Normal)**

- Factory Default is set as (**0**), **OFF**.

Command 37

AC Fault Report

- The IC2020 can be programmed to send a Fault Report when an AC power failure is detected:

Function Selection	Result
(0)	**OFF** **(Send no Report)**
(1)	**ON** **(Send Report)**

- Factory Default is set as (**1**), **ON**.

<NOTE>

☞ Reporting will only be made after a continuous one hour of AC Fault condition is detected.

Command 38

Follow-On & Call-Back Function

- The Command is available for Digital Reporting Methods (when Command #20 - #24 is set as (0), (1) or (2))

Function Selection	Result
(0)	**Follow-On**
(1)	**Call-Back**
(2)	**Follow-On & Call-Back**

- Factory Default is set as (**0**)**, Follow-On**.
- When this function is programmed as (**0**), after a successful reporting to the Monitoring Center, IC2020 will automatically enter the specific Follow-On mode as specified by Command (**45**).
- When this function is programmed as (**1**), after a successful reporting to the Monitoring Center, IC2020 will automatically hang up the line and start a 5-minute waiting period to auto answer any incoming phone calls from the Monitoring Center.
- When this function is programmed as (**2**), after a successful reporting to the Monitoring Center, the IC2020 will automatically enter specific Follow-On mode as specified by Command (**45**).

  Once Follow-On Mode is terminated, IC2020 will automatically start a 5-minute waiting period to auto answer any incoming phone calls from the Monitoring Center.

<NOTE>

☞ When the Monitoring Center calls back within this 5-minute period, IC2020 auto-answers the call after the 1st -2nd ring and waits for proper Access Code (default is (**1111**)) entry followed by the (#) key within 15 sec.

Upon the correct Access Code received, IC2020 will then open a Full-Duplex Communication to allow the Call Recipient to speak to IC2020 directly.

☞ The first digit of Access Code must be entered within 15 secs, otherwise, IC2020 will disconnect the call automatically.

☞ Failure to enter the correct Access Code within 2 mins will cause IC2020 to automatically disconnect the call.

☞ To terminate the call, press DTMF (**9**) or NURSE BUTTON on IC2020.

☞ If the 5-minute waiting period is up, IC2020 will automatically exit this waiting mode and return to idle mode.

☞ Command #41 (Auto Answer for Remote Programming) will not be able to proceed during the 5-mins Call-back time.

Command 39

Dialing Mode

- This function is for you to select the dialing method of your telecommunications.
- There are two dialing methods available for user:

Function Selection	Result
(0)	**TONE**
(1)	**PULSE**

- Factory Default is set as (**0**), **TONE**.

Command 40

Set Access Code

- The Access Code is used to enter Programming Menu (locally or remotely), and the Call-Back Function.
- It consists of 4 digits and has been set to (**1111**) as factory default. Before you set your own Access Code, (**1111**) must be keyed in.
- To set a new Access code; enter the desired (**4-digit number**) in **Function Selection**.

Command 41

Auto Answer for Remote Programming

- IC2020 can be programmed to auto answer incoming phone calls after a pre-set number of rings have been reached. The number of rings ranges from (**00**) (no auto answer) to (**32**) rings.

Function Selection	Result
(00)	**OFF**
(01) - (32)	**ON**

- Factory Default is as (**20**) Rings.

<NOTE>

☞ If **00** is selected, it means the IC2020 cannot auto-answer the call by ring count. If you want to do Remote programming, please follow the Remote Programming method described under *System Conifuration, I. Entering Programming Mode: 2. Remote Programming Mode.*

Command 42

Guard Time Delay

- IC2020 can be programmed to delay alarm reporting from (**00**) (instant reporting) to (**99**) seconds.
- During this time period, a voice prompt "**Bi-Bi-Bi Emergency**", will be played twice to alert user at a rate of approximately once per 3 sec.
- If a false alarm is triggered, it can be cancelled within the Guard Time Delay.

Function Selection	Result
(00)	**INSTANT REPORTING**
(01) - (99)	**DELAY**

- Factory Default is set as (**05**), **5 SEC**.

<NOTE>

☞ The Emergency alarm cannot be cancelled after the Guard Time is elapsed.

Command 43

Periodic Test Call

- IC2020 can be programmed to make test calls periodically from (00) (no test call) to every (1) - (7) or 30 days:

Function Selection	Result
(0)	**OFF**
(1) - (7)	**1 - 7 DAYS**
(8)	**30 DAYS**

- Factory Default is set as (**5**), **5 DAYS**.

Command 44

Mobility Timer

This function monitors user movement around the premises and sends an inactivity report to the Monitoring Center if the user fails to reset the inactivity timer.

- This will disable or enable the Inactivity Timer with selectable count down periods. Options are:

Function Selection	Result
(0)	**DISABLE**
(1)	**12HR**
(2)	**24HR**

- Factory Default is set as (**0**), **DISABLE**.

<NOTE>

☞ The Mobility Timer counting down can be reset by:

1. Pressing the **NURSE** button on IC2020, or,
2. Movement detected by PIR Detector

☞ When Mobility Timer expires and no reset signal is received, IC2020 starts to emit one long beep every 5 minutes to alert the user. After 30 minutes, if reset signal is not received, a mobility alarm reporting will be made.

☞ The reporting method for mobility alarm is the same as the emergency alarm. The report will be sent based on your reporting methods without Guard Time waiting.

☞ When (**0**) is selected, no code is sent to Monitoring Centers.

☞ When IC2020 is in idle mode, press and hold the White NURSE button for 16 seconds, until you hear a long beep. Then release the button; the Mobility function will be disabled.

If no command is received after the waiting period, the system will automatically return to Idle mode..

☞ When (**1**) is selected, after IC2020 has made a report to the Monitoring Center, it will automatically enter **Listen-In Half Duplex** for 1-60 minutes (set by Command 46) allowing the Monitoring Center Personnel to listen in to what is happening on the other side.

☞ When (**2**) is selected, after reporting, the IC2020 will immediately enter a **Two-way Full-duplex Communication** mode for 1-60 minutes (set by Command 46), that gives the user the ability to speak directly with the Monitoring Center Personnel.

☞ If either Scancom or Tunstall reporting format is selected, IC2020 will ignore Command #45 selections. It will always open a Two-way voice for Follow-On choice.

Command 45

Follow-On Mode Choice

- This Command is only available for Digital reporting with Command #38 set as (**0**) or (**2**).
- It is used to select the Follow-On Choice for IC2020 after it has made a report to the Monitoring Center.
- After reporting, IC2020 can wait for further commands, or enter a Two-Way Full Duplex Communication, or Listen-In Half Duplex Communication immediately according to the setting under this command:

Function Selection	Result
(0)	**WAIT COMMAND**
(1)	**LISTEN**
(2)	**TWO WAY**

- Factory Default is set as (**2**), **TWO WAY**.

<NOTE>

☞ When (**0**) is selected, after reporting the Contact ID Code, IC2020 will wait for 1-60-min, set by Cammand 46, and then follows the DTMF commands that are received from the Central Monitoirng Station for action.

Command 46

Follow-On Mode & Two way Period

- This command is used to program the allowable time duration for Follow-On mode choice (Commend #45) & Two-way voice communication period (Speech mode). It can be set from (**01**) (1 minute) - (**60**) (60 minutes).

Function Selection	Result
(01)	**1 minute**
(02)	**2 minutes**
(03)-(60)	**3-60 minutes**

- Factory default is set as (**10**), **10 minutes**. The allowable time duration for either **Wait Command**, **Two-way**, **Listen-In Only** or **Two-way voice comminucation** in **Speech mode** and **Nurse call** is 60 mins. During the two-way voice communication period, IC2020 will emit two beeps via the telephone handset to alert the call recipient the remaining time of 20 & 10 sec. Pressing the assigned DTMF key can extend another 1-60 minute(s).

Command 47

Off-Set time

- After the Control Panel's power is supplied, the time of the Check-in Report starts calculating.
- According to the setting of Off-Set time, the Control Panel will send Check-in Report once, and then send report according to the setting of Command 43 – Test call.

Function Selection	Result
(1)	1 Hour
(2)	2 Hours
(3)	3 Hours
(4)	4 Hours
(5)	8 Hours
(6)	12 Hours

- Factory default is set as (**1**) 1 Hour. When the **Off-Set time** is reset in programming Mode, the time of the Off-Set period will recalculate.
- Off-Set time Report will be sent only once, and then the Control Panel sends Check-in Report according to setting of period test call, unless the Control Panel restarts or the Off-Set time is reset.

Command 49

Supervision

- This option is used to enable system supervision function. Once enabled, IC2020 will be able to receive the check-in signals from Wrist Pendants (WTR-) to indicate their proper functioning.

Function Selection	Result
(0)	Disable
(1)	4 Days
(2)	5 Days
(3)	6 Days
(4)	7 Days
(5)	8 Days
(6)	9 Days

- Factory Default is set as (**4**), **4 Days**.
- When the supervisory timer expires and no supervision signal is received from WTR-, the supervisory alarm reporting will be made.
- The reporting for supervisory alarm is status reporting (Contact ID 147, Scancon 515555559, or Tunstall D#1013). The report will be sent based on your reporting methods without Guard Time waiting and Follow-On.

Command 50

Record Message

- To record a voice message:

Step 1: Enter **50#**. A long beep will be heard both via the phone set and IC2020, indicating it is ready to record your message.

Step 2: Please speak toward the microphone on IC2020 to record your message. A maximum of 20 seconds is allowed.

Step 3: Press # key to end the recording before the time is up. Two beeps will be heard both via the phone set and IC2020, indicating the recording is completed or the time is up.

<NOTE>

☞ Message can only be recoreded locally alongside IC2020 via the bulilt-in Microphone.

☞ Please use command #51 to check the recorded message.

☞ To re-record, please repeat Steps 1-4 to overwrite the message.

Command 51

Play Message

- This function plays the recorded message by Command 50.
- If the recorded message is shorter than the maximum recording time, message played will be shortened accordingly.

- Once the playback is finished, two beeps will be heard as an indication.

<NOTE>

☞ Message can only be heard locally alongside IC2020 via the bulilt-in Speaker.

Command 52

Panic Mode Enable

- The IC2020 can be programmed to enable Panic Mode or not.
- When set as **ON**, Panic Alarm can be activated/deactivated via the Remote (IC2020TX).
- To activate Panic Alarm: Press and hold the White NURSE button for 5 sec. The NURSE button will light up steadily in Blue for 1 sec. The Control Panel will repeatedly play "**Beep Beep Beep Emergency**" until Panic Alarm is deactivated.
- To deactivate Panic Alarm: Press and hold the White NURSE button for 5 sec again. The NURSE button will light up steadily in Blue for 1 sec.

Function Selection	Result
(0)	**OFF** **(Disable)**
(1)	**ON** **(Enable)**

- Factory Default is set as (**0**), **OFF**.

<NOTE>

☞ Panic Alarm can only be triggered via the Remote (IC2020TX), and only when Panic Mode Enable is set as **ON**.

Command 53

Line Failure Detection Voice Message

- This option is used to set the repeating cycle of the voice prompt "**Phone line trouble**" when telephone line failure is detected.
- If set as 1 minute, then the voice prompt will repeat every 1 minute, and so on.

Function Selection	Result
(00)	**Disable** **(No repeat)**
(01)	**1 minute**
(02)	**2 minutes**
(03)-(60)	**3-60 minutes**

- Factory Default is set as (**00**), No repeat.

<NOTE>

☞ During the line failure period, the voice prompt "**Phone line trouble**" will be played by the set repeating cycle, but the red LED will still flash quickly until the line failure is restored.

☞ During the line failure period, if the Emergency or Nurse button is pressed or any sensor is triggered, the red LED will flash quickly and the voice prompt "**Phone line trouble**" will be played (even if set as **00**, **Disable**). The reporting will then be made after the line failure is restored.

☞ During the reporting period after line failure restore (if the Emergency or Nurse button is pressed or any sensor is triggered during the line failure period), line failure detection will be temporarily stopped.

☞ Line failure and restore will not be reported.

☞ At least one telephone and account # must exist in order for line failure detection to start. Line failure detection will not start if no telephone nor account # exist (even after powered on for one minute).

Command 54

Nurse Call Out Period

- This command is used to program the allowable time duration for **Nurse Call** mode in Two-way voice communication period (Speech mode). It can be set from (**01**) (1 minute) - (**60**) (60 minutes).

Function Selection	Result
(01)	**1 minute**
(02)	**2 minutes**
(03)-(60)	**3-60 minutes**

- Factory default is set as (**60**), **60 minutes**. During the two-way voice communication period, IC2020 will emit two beeps via the telephone handset to alert the call recipient the remaining time of 20 & 10 sec. Press the assigned DTMF key to extend another 1-60 minute(s).

Command 80-84

Remove Devices

- The IC2020 can be programmed to remove ***ALL*** previously learnt-in devices by entering (**80)** followed by (**#**). The system will sound an acknowledge beep over the phone for the user.
- Command (**81**) is used to remove ***Pendant # 1 (learnt-in by Command 91)***
- Command (**82**) is used to remove ***Pendant # 2 (learnt-in by Command 92)***.
- Command (**83**) is used to remove **Silent Wrist *(learnt-in by Command 93)***.
- Command (**84**) is used to remove ***Other Devices (learnt-in by Command 94)***.

Commands 91

Learn-In Pendant #1

- Only one Pendant can be learnt into IC2020 by using Command #91.
- For learning **Pendant #1** :

  Step 1: Enter **91** + # on the phone set, then a short beep will be heard via the phone set.

  Step 2: Press the Pendant Button within 20 sec.

  ☞ Learning can only be completed within the signal reception range of IC2020.

  ☞ If no signal is received within 20 sec, IC2020 will emit a long beep and automatically returns to Programming mode.

  Step 3: IC2020 will emit 2 beeps to indicate the Pendant #1 is learnt-in successfully.

  ☞ If **one long beep** is emitted instead of 2 beeps, this indicates:

  ✓ The device has already been learnt-in.

  ✓ Another device has been learnt-in before.

Commands 92

Learn-In Pendant #2

- Only one Pendant can be learnt into IC2020 by using Command #92.
- For learning **Pendant #2** :

  Step 1: Enter **92** + # on the phone set, then a short beep will be heard via the phone set.

  Step 2: Press the Pendant Button within 20 sec.

  ☞ Learning can only be completed within the signal reception range of IC2020.

  ☞ If no signal is received within 20 sec, IC2020 will emit a long beep and automatically returns to Programming mode.

  Step 3: IC2020 will emit 2 beeps to indicate the Pendant #2 is learnt-in successfully.

  ☞ Adding a Pendant for a second time is prohibited unless it is removed from the system first.

  ☞ If **one long beep** is emitted instead of 2 beeps, this indicates:

  ✓ The device has already been learnt-in.

  ✓ Another device has been learnt-in before.

Commands 93

Learn-In Silent Pendant

- Only one Silent Pendant can be learnt into IC2020 by using Command #93.
- For learning **Silent Pendant** :

Step 1: Enter **93** + # on the phone set, then a short beep will be heard via the phone set.

Step 2: Press the Pendant Button within 20 sec.

☞ Learning can only be completed within the signal reception range of IC2020.

☞ If no signal is received within 20 sec, IC2020 will emit a long beep and automatically returns to Programming mode.

Step 3: IC2020 will emit 2 beeps to indicate the Silent Pendant is learnt-in successfully.

☞ Adding a Pendant for a second time is prohibited unless it is removed from the system first.

☞ If **one long beep** is emitted instead of 2 beeps, this indicates:

- ✓ The device has already been learnt-in.
- ✓ Another device has been learnt-in before.

<NOTE>

☞ When IC2020 received the alarm signal from the Silent Pendant, it will not sound any warning beeps during Reporting and Guard Time period.

Commands 94

Learn-In Device

- Up to 7 devices can be learnt into IC2020 by using Command #94.
- The available devices that can be learnt-in Command #94 are:
  - ✓ PIR Sensor ----- PIR
  - ✓ Smoke Detector ---- SD
  - ✓ Carbon Monoxide ---- CO
  - ✓ Fixed Panic Button ---- PB
  - ✓ Wrist Transmitter ---- WTR
  - ✓ Pendant Transmitter ---- WTR
  - ✓ Water Sensor ---- WS
  - ✓ Remote --- IC2020TX

Step 1: Enter **94** + # on the phone set, then a short beep will be heard via the phone set.

Step 2: Press the learn button on the device within 20 sec. For Remote Controller, press either the Red or the Green button.

☞ Learning can only be completed within the signal reception range of IC2020.

☞ If no signal is received within 20 sec, IC2020 will emit a long beep and automatically returns to Programming mode.

Step 3: IC2020 will emit 2 beeps to indicate the device is learnt-in successfully.

☞ Adding a Pendant for a second time is prohibited unless it is removed from the system first.

☞ If **one long beep** is emitted instead of 2 beeps, this indicates:

- ✓ The device has already been learnt-in.
- ✓ When an 8th device is attempted to learn-in.

Step 4: Repeat Steps 1-3 until all devices are learnt-in.

<NOTE>

☞ Adding a device for a second time is prohibited unless it is removed from the system first.

Command 98

Factory Default Reset

- To Reset IC2020 to factory default settings, enter (**98**) and then (#).
- After one short beep, continue by entering (✱✱) and then ending with another (#), one beep will sound for termination.
- Once the **Factory Default Reset** is executed, all the programmed data is returned to its default value and all the devices that have been learnt-in are removed. You have to do the programming and learn-in the device one by one again.

Command 99

Exit Programming Mode

- Enter (**99**) and (#), after one short beep, IC2020 exits the Programming Mode and returns to idle mode.

4. Operation

4.1. Idle Mode

When the system is in Idle Mode, the IC2020 is ready to perform the following functions:

4.1.1. Auto-Answer Incoming Phone Calls

This function is only available when Command #31 is set as **ON** (factory default is **OFF**).

- For an Incoming telephone call, IC2020 will emit cycles of 2 quick beeps.
- User can answer the call either by pressing the **Pendant Button** or the **RED EMERGENCY BUTTON** on IC2020.
- Once IC2020 answers the call, it will open a Two-Way Voice Communication. The **RED EMERGENCY BUTTON** illuminates.

<NOTE>

☞ To hang-up, press the **Pendant Button** again or the **NURSE** button on IC2020.

☞ **30-minute** is allowed for each call.

4.1.2. Nurse Call

This function is only available when Command #7 is programmed.

Step 1. From Idle mode, press and hold the **NURSE** button for 3~15 seconds until IC2020 emits 3 beeps.

Step 2. Release the button.

Step 3. IC2020 will play a voice prompt "**Calling nurse line**" and at the same time dial the phone number entered in Command #7.

<NOTE>

☞ When 5 short beeps (warning beeps) sound instead of a short beep, it means IC2020 is not in idle mode and it is not allowed to use Nurse call function.

Step 3. If the dialing succeeds, IC2020 will open a two-way voice communication between the call recipient and IC2020. The duration of call is defined by Command 54. The Red button backlight will illuminate during the communication.

<NOTE>

☞ If the dialing fails, IC2020 will not retry.

☞ Press Nurse button can stop and cancel the dialing & call at any time.

☞ During the two-way voice communication, press the White Nurse button on Control Panel can terminate the call at any time.

☞ During the two-way voice communication, press the Red Emergency button on Control Panel can terminate the call at any time, and report to the Monitoring Center.

Step 4. At the last 20 & 10 sec, IC2020 will emit a beep via the telephone handset to alert the call Recipient. If the Call Recipient needs more conversation time, press any DTMF key (except 9) can add another 60 minutes (as defined by Command 54).

Step 5. Press DTMF 9 or Nurse button to terminate the call. The Red button backlight dims and IC2020 returns to idle mode.

Step 6. After two-way voice communication, IC2020 will call out for CID Digitals Reporting (command 06), event code as 326 (**Trouble code to supervisory)**

4.1.3. AC Power Check Up

- If the AC Power failure is detected for 2 minutes or longer, the GREEN LED starts to flash as a visual warning to the user.
- Once the AC Power resumes, the GREEN LED turns steady on again.
- If the AC Power failure lasts for an hour, IC2020 will send an AC Failure report to the Monitoring Center.
- After the Power restoration lasts more than one hour, IC2020 will report AC Restore to the Monitoring Center.
- Green LED will turn ON 15 seconds after power restoration.

4.1.4. IC2020 Low Battery

- IC2020 continuously checks its own Battery Condition 30 minutes after powering up.
- When the battery low condition (voltage less than 7.1 V) lasts for **4 - 6 min**, IC2020

will report to the Monitoring Center, and the GREEN LED slowly flashes.

- If Low Battery condition persists, IC2020 will emit 2 short beeps every hour.
- Press the **NURSE** button to clear the warning beeps, and the LED returns to steady ON.
- After the battery voltage is restored and lasts for 12 hours, IC2020 will send **Battery Restore** report to Monitoring Center and the GREEN LED returns to steady ON.

4.1.5. Devices Low Battery

- Whenever IC2020 receives a battery low signal from a particular device, it will report to the Monitoring Center each time a low battery signal is received, and the GREEN LED will flash rapidly until the fault condition is cleared.
- In addition, IC2020 will emit 4 short beeps every hour. Press the **NURSE** button on IC2020 will stop the warning beeps.

<NOTE>

☞ If any device Low Battery signal is received again, the LED and warning beeps will be performed accordingly. Press the **NURSE** button again to silent the warning beeps.

- Portable devices such as Wrist Transmitter and Panic Button must reside in the RF range for the Control Panel to receive the low battery signal and then report to the Monitoring Center.
- If line failure is detected and the device low battery reporting has been previously made before the line failure period, then no more device low battery reporting will be made after the line failure is restored. However, if the device low battery condition is first detected during the line failure period, then a device low battery reporting will be made after the line failure is restored.
- After the faulty battery is replaced, IC2020 will immediately send **Battery Restore** report to the Monitoring Center for that particular device.

4.1.6. Automatic Check-in Report = Periodic Test Call

- When IC2020 is programmed to send a periodical check-in report, IC2020 will report to the Monitoring Center accordingly.
- The Periodic-Check-in Timer will be reset whenever the Programming Mode is entered.

4.1.7. Mobility Timer

- In order to check the user's well being, a Mobility Timer can be set by using Command #44.
- If Mobility Timer is set as **Enable**, a counting down period starts from:
  - Immediately after powering up IC2020
  - Exit Programming Mode
- After the pre-set Timer expires, IC2020 will emit a beep at every 5 minutes to notify the user for 30 minutes.
- When the Mobility timer is not reset after 30 minutes, IC2020 will send a **Mobility Timer Expired** report to the Monitoring Center every 30 min until timer is reset.
- Mobility Timer can be reset by pressing **NURSE** button once on IC2020 or whenever a movement is detected by PIR Detector.
- To disable the Mobility Timer function:
  - Set Command #44 to **0** (Disable)

<NOTE>

☞ Please use Command #44 to enable the Mobility timer again.

4.1.8. No Pendant Present

- ***This function is only available for the digital Contact ID reporting method.***
- If there is no pendent being learnt into IC2020 30 min after powering up, it will send a **No Pendant Learnt-in** report to the Monitoring Center and repeat every hour thereafter, until a pendant is successfully learnt in.

4.1.9. Remote

- ***This function is only available if a Remote (IC2020TX) has been learnt in.***
- Press the **Red button** once to dial the Emergency line. IC2020 will play a voice prompt "**Bi-Bi-Bi Emergency**" twice, then send an Emergency alarm report to the Monitoring Station.
- Press the **White button** once to dial the Nurse line. IC2020 will play a voice prompt "**Calling nurse line**" once.

4.2. Alarm Activation

- When an alarm is triggered, IC2020 will enter the Guard Time Delay period (see Command 42). Both RED LED and RED EMERGENCY BUTTON backlight turn on steadily.
  - During the Guard Time period, pressing the **NURSE** button on IC2020, it will cancel the alarm signal and return to Idle Mode.
  - If the Guard Time Delay is set as **00**, IC2020 will dial immediately without the voice prompt.
- The Alarm reporting cannot be cancelled by pressing the **NURSE** button on IC2020 after the Guard Time Delay expires.

Confirmation Beeps

- Once Guard Time Delay expires, IC2020 will summon help based on the programmed reporting method. A continuous cofirmation beeping sound (about 3 secs per beep) will be heard after IC2020 dials out, to inform you that the call is in progress (regardlss of Digital or Speech Reporting Method).
- Confirmation beeps will be heard in the following situations:
  - After IC2020 dials out to summom help until handshake (for Digital Reporting Method)
  - After IC2020 dials out to summom help until the call is answered (for Speech Reporting Method)
  - When first reporting failed, and IC2020 retries
- Once the first reporting succeeded, and IC2020 is in progress of back-up reporting, the confirmation beeps will not be heard.

Digital Reporting Method

- After the alarm reporting is successfully received by the Monitoring Center, IC2020 will then follow the choice of Command #38, to enter **Follow-On and/or Call-Back** mode:
  - If Command #38 is set as **0**, Follow-On, or **2**, Follow-On & Call-Back, it will then follow its setting as in Command #45, **Follow-On Choice** to open Two-way Voice, or, Listen-In, or just waiting for commands.
  - If Command #38 is set as **1**, Call-Back or **2**, Follow-On & Call-Back; after alarm reporting, it will then wait for 60 mins for Monitoring Center Personnel to call-back after reporting.

    When the Monitoring Center calls back within this 60-minute period, IC2020 auto-answers the call after the 1st -2nd ring and waits for proper Access Code (default is **1111**) entry followed by the (**#**) key within 15 sec.

    Upon the correct Access Code received, IC2020 will then open a Full-Duplex Communication to allow the Call Recipient to speak to IC2020 directly. You can also use the following DTMF command to switch the speech mode.

    Enter DTMF **(1)** to **TALK ONLY**

    Enter DTMF **(2)** to open **TWO-WAY VOICE COMMUNICATION**

    Enter DTMF **(3)** to **LISTEN-IN ONLY**

    Enter DTMF **(9)** to **HANG UP**

● Follow On Operation

During the Follow-On period, the Monitoring Center can remotely control IC2020 by the DTMF commands below:

1. CONTACT ID FORMAT:

- Enter **(2)** to open **TWO-WAY VOICE COMMUNICATION**
- Enter **(1)** to **TALK ONLY**

- Enter **(3)** to **LISTEN-IN ONLY**
- Enter **(9)** to **HANG UP**

2. SCAMCOM FORMAT:

- Enter **(2)** to **TALK ONLY**
- Enter **(1)** to **LISTEN-IN ONLY**
- Enter **(3)** to open **TWO-WAY VOICE COMMUNICATION**
- Enter (**5**) to **HANG UP**
- Enter **(∗)** to **TOGGLE**

3. TUNSTALL FORMAT:

- Enter **(C)** to **TALK ONLY**
- Enter **(∗)** to **LISTEN-IN ONLY**
- Enter **(3)** to open **TWO-WAY VOICE COMMUNICATION**
- Enter **(#)** to **HANG UP**

- The allowable time duration for **Follow-On Period** is set by Command #46 (1-60 mins).
- During Two-way Voice Communication, at 20 & 10 seconds before the Follow-On period expires, IC2020 will emit two beeps to alert both the user and the Monitoring Center Personnel.
- To extend the conversation, the Monitoring Center personnel can press the DTMF command again to add another 1-60 mins.
- Voice Communication can be terminated by the following:
  - DTMF Commands:

    Contact ID: 9

    Scancom: 5

    Tunstall: #
  - The **NURSE** button is pressed.
  - Automatically hangs up after the Follow-On Period expires.

Help Arrived Signaling

This function is only available for the digital Contact ID reporting method, and when Help Arrive Signaling (Command #33) is set to enable.

- Once the Follow-On Period or Call-back is completed, IC2020 will start counting down the 15-min Help Arrived Timer. The **EMERGENCY** button starts flashing.
- Pressing the **NURSE** button, the IC2020 will report to the Monitoring Center that help has arrived. The **EMERGENCY** button stop flashing and return to normal backlight.
- If the **NURSE** button is not pressed within 15 min, the IC2020 will send another **Help Call** report again and to inform the Monitoring Center that no help has arrived.
- IC2020 will then enter the 15 min waiting period again. If **NURSE** button is still not pressed, IC2020 will exit reporting mode and return to Idle Mode.

Voice Message Reporting Method

- If voice reporting method is selected, and after the dialing is successful, IC2020 will play the pre-recorded message (see Command #50). The voice message will be played up to a max. of 40 seconds. IC2020 will emit a beep via the telephone handset signaling 20 & 10 sec time remaining to alert to the call Recipient.
- During the voice message playing, pressing DTMF 1, 2 or 3 keys to enter the following mode for 60 minutes:
  - Press **(2)** to open **TWO-WAY VOICE COMMUNICATION**
  - Press **(1)** to **TALK ONLY**
  - Press **(3)** to **LISTEN-IN ONLY**
  - Press **(9)** to **HANG UP**

  IC2020 will emit a beep via the telephone handset signaling 20 & 10 sec time remaining to alert to the call Recipient.
- If the Call Recipient needs more conversation time, s/he can press either **1** or **2** or **3** on the phone set to add another 60 minutes.
- If the Voice period expires without any DTMF command press, the call will automatically hang-up and be recorded as an unsuccessful call. It will retry up to a max of 4 times on each Tel. Number

accordingly.

Speech Reporting Method

- If Speech Reporting Method is selected, after dialing, IC2020 will open a two-way voice communication between the Call Recipient and IC2020 for 1-60 minutes (set by Command #46).
- At 20 & 10 seconds before the time period expires, IC2020 will emit two beeps via the telephone handset to alert the user.
- If the Call Recipient needs more talk time, s/he can press any keys except 9 on their phone set to add another 1-30 minutes (set by Command 46).
- To terminate the call, press either (**DTMF 9**) or **NURSE** button on IC2020.
- During the Speech period, if there is no any DTMF command pressed, the call will automatically hang-up and be recorded as an unsuccessful call. It will retry up to a max of 4 times on each Tel. Number accordingly.

Call Sequence

- The call sequence is followed by Tel. #1, Tel. #2, Tel. #3 to Tel. #4. It is recommended to set digital reporting method in first priority for immediate help.
- If either Digital Alarm reporting OR Speech Alarm reporting is set, with anyone answered successfully, the call sequence will be terminated automatically.
- If more than one reporting methods are set, the reporting call sequence will only be terminated once each reporting method is answered successfully.
- There is a calling pause between each call. For different Tel. Numbers the pause is set as 5 sec, and for same Tel. Number, it is set as 62 sec.

Retry Method

Retry Circle: Each Tel. Phone number can be retried up to 5 times alternative; and max. 15 calls will be retried. During the retry period, the Red LED still stays on steadily, while the Red Emergency Button backlight dims.

In the retry circle, if any digital, voice message, or speech reporting fails, IC2020 makes a 10-min pause, then starts another 15-call retry circle, followed by another 10-min pause. This cycle repeats until all reporting is/are answered successfully.

During the 10-min pause, IC2020 returns to normal mode with Red LED on:

- Press the White Nurse button to terminate the reporting.
- If new event happens, IC2020 starts the reporting immediately.

4.3. Walk Test (Range Test)

Put IC2020 in **Learning Mode** to determine the operation range of the devices.

Step 1. From Idle mode, press and hold the **EMERGENCY & NURSE** button for 6 seconds.

Step 2. Once pressed, a button beep sound will be heard. IC2020 will emit 3 beeps at 6 sec.

Step 3. Release the button after you heard two short beeps. Then, IC2020 is now in **Learning Mode**. The **RED LED** begins to flash.

Step 4. Move the device to your desirable location in the house, and press the **TEST button** to observe the range for its operation.

Step 5. If IC2020 responds with **one long beep**, then the particular device is within the operation range.

Step 6. To exit Learning Mode, press both **NURSE** & **EMERGENCY** buttons simultaneously.

Or, if no signal is received within 30 sec, IC2020 will exit Learning mode.

4.4. Global Test

- Global Test is used to test if the complete system is working properly.

  To do the Global Test:

  Step 1. Press the **NURSE** button once.

  Step 2. **Within 5 sec**, press Pendant button.

  Step 3. IC2020 will emit a short beep and report to Monitoring Center.

4.5. Panic Alarm Mode

A Panic Alarm can be triggered locally to attract the attention of others in the area. An audible warning will be heard through the Control Panel, but no reporting is made to the Central Monitoring Station.

- To activate/deactivate Panic Alarm (when Panic Alarm Enable is set as ON by Command #52):

  On the Remote (IC2020TX): Press & hold once on the White NURSE button. The White button will light up steadily in Blue for 1 sec after the button is released. The Control Panel will repeatedly play "**Beep Beep Beep Emergency**" until Panic Alarm is deactivated. To deactivate Panic Alarm, press and hold the Nurse button (White) for 5 sec again. The White button will light up steadily in Blue for 1 sec after the button is released.

  No reporting is made during Panic Alarm.

  However, while in Panic Alarm, pressing either the Emergency button (Red) on the Remote (IC2020TX) or on the Control Panel (IC2020) will still dial the Emergency line and send an Emergency Report to the Central Monitoring Station.

4.6. Factory Reset

IC2020 will clear all programmed parameters by the following sequence:

Step 1. Unplug the power cord from the DC Jack.

Step 2. Remove the Battery Switch rubber cap.

Step 3. Use a pen or screw-driver to slide the Battery switch to OFF position (or the opposite direction of the ON marking)

Step 4. Plug the power cord into the DC jack while holding down both the **EMERGENCY** & **NURSE** buttons, until one **long beep** is heard, indicating that the Factory Reset is successful.

Step 6. Release both buttons

Step 7. Slide the Battery Switch back to ON position again.

Step 8. Replace the Battery Switch rubber cap.

<NOTE>

☞ Once the **Fatory Reset** is executed, all the programmed data is returned to its default value and all the devices that have been learned-in are removed. You will have to do the programming and learnt-in the devices one by one again.

5. Appendix

5.1. CID Event code

- **100 - Panel emergency**
  - When the red EMERGENCY Panel button is pressed.
- **101 - Personal emergency**
  - When the Wrist Transmitter (WTR) or Emergency Pendant is pressed.
- **111 - Smoke emergency**
  - When the Smoke Detector (SD) is triggered.
- **147 - Sensor Supervisor Failure**
  - When IC2020 is unable to receive the signal transmitted from the Wrist Transmitter for a pre-set period by Command #49.
- **154 - Water emergency**
  - When the Water Sensor (WS) is triggered
- **162 - Carbon Monoxide emergency**
  - When the Carbon Monoxide Detector (CO) is triggered
- **301 - Panel AC Failure**
  - When AC power fails for more than 10 sec, Green LED flashes every sec with a beep every 30 sec.
- **302 - Panel Low battery**
  - When IC2020 is under Low Battery status, Green LED flashes every 2 sec with a beep every hour.
- **326 – Trouble code to supervisory**
  - Report a trouble code to supervisory when nurse is triggered.
- **333 - No WTR Learnt-in**
  - When the IC2020 has no WTRB learned-in previously.
- **373 - Smoke Low battery**
  - When the Smoke Detector is under Low Battery Status, Green LED flashes every 2 sec with 2 beeps.
- **380 - WTR Low Battery**
  - When the Wrist Transmitter (WTR) or Emergency Pendant is under Low Battery Status, Green LED flashes every 2 sec with 2 beeps.
- **384 - Other devices Low Battery**
  - When other devices (except SD and WTR) are under Low Battery Status, Green LED flashes every 2 sec with 2 beeps whenever Low Battery signal is received from the device. The frequency of the beep will depend on the device.
- **406 - Emergency Cancel**
  - When the White NURSE Button is pressed while reporting to Monitoring Center.
- **602 - Periodic test report**
  - When the IC2020 makes periodic Check-in reporting.
- **606 - Follow-On Function**
  - When the IC2020 receives kiss-off from Monitoring Center for opening two-way voice channel.
- **611 - Global test**
  - When the IC2020 reports Global Test to Monitoring Center.
- **641 - Mobility**
  - When the IC2020 makes Mobility Check reporting.

5.2. Tunstall Event code

- **D#1011 - Panel AC Restored**
  - When the AC power is restored to the IC2020.
- **D#1012 - Global test & Periodic test call report**
  - When the IC2020 reports Global Test to monitoring Center.
  - When the IC2020 reports Periodic test call to monitoring Center.
- **D#1013 – Sensor Supervisor Failure**
  - When IC2020 is unable to receive the signal transmitted from the Wrist Transmitter for a pre-set period by Command #49.
- **D#1014 - Device Low Battery**
  - When other devices (except SD and WTR) are under Low Battery Status, Green LED flashes every 2 sec with 2 beeps whenever Low Battery signal is received from the device.
- **D#1015 - Mobility**
  - When the IC2020 makes Mobility Check reporting.
- **D#1016 - Personal emergency**
  - When the Wrist Transmitter (WTR) or Emergency Pendant is pressed.
- **D#1017 - Panel emergency**
  - When the red EMERGENCY Panel button is pressed.
  - When Water sensor is triggered.
- **D#1018 - Smoke / CO emergency**
  - When the Smoke Detector (SD) is triggered.
  - When the Carbon Monoxide Detector (CO) is triggered.
- **D#1019 - Panel AC Failure**
  - When AC power fails for more than 10 sec, Green LED flashes every sec with a beep every 30 sec.
- **D#1019 - Panel Low battery**
  - When IC2020 is under Low Battery status, Green LED flashes every 2 sec with a beep every hour.

5.3. Scancom Event code

- **515555517 - Panel emergency or WS Emergency**
  - When the red EMERGENCY Panel button is pressed or WS triggered
- **515555557 - Cancel Panel emergency**
  - When the EMERGENCY alarm is canceled.
- **515155557 - Pendant 1 and Unit Button emergency**
  - When the Pendant 1 or Unit button is pressed.
- **555155517 - Pendant 2 emergency**
  - When the Pendant 2 is pressed.
- **555551557 - AC Failure**
  - When the AC power fails for more than 10 sec, Green LED flashes every sec with a beep every 30 sec.
- **555553557 - AC Failure Restore**
  - When the AC power is restored to the IC2020.
- **515555559 - Global test / Auto-check-in report / Sensor Supervisor Failure**
  - When the IC2020 reports Global Test to monitoring Center.
- **555551558 - Panel Low battery**
  - When IC2020 is under Low Battery status, Green LED flashes every 2 sec with a beep every hour.
- **555553557 - Panel Low battery Restore**
  - When the Panel Low Battery restored for IC2020.
- **515555517 - WTR and/or PB emergency**
  - When the Wrist Transmitter (WTR), Emergency Pendant (EP) or Panic Button (PB) is pressed.
- **515555518 - WTR and/or PB Low battery**
  - When the Wrist Transmitter (WTR), Emergency Pendant (EP) or Panic Button (PB) is under Low Battery status, Green LED flashes every 2 sec with 2 beeps.

- **535555557 - WTR and/or PB Low battery Restore**
  - When the Low Battery status of Wrist Transmitter (WTR), Emergency Pendant (EP) or Panic Button (PB) is restored.
- **155555517 - SD or CO emergency**
  - When the Smoke Detector (SD) or Carbon Monoxide (CO) is pressed.
- **155555518 - SD or CO Low battery**
  - When the Smoke Detector (SD) or Carbon Monoxide (CO) is under Low Battery status, Green LED flashes every 2 sec with 2 beeps.
- **355555557 - SD or CO Low battery Restore**
  - When the Low Battery status of Smoke Detector (SD) or Carbon Monoxide is restored.
- **555555558 - WS Low battery**
  - When the Low Battery status of Water Sensor (WS) is under Low Battery status, Green LED flashes every 2 sec with 2 beeps.
- **553555557 - WS Low battery Restore**
  - When the Low Battery status of Water Sensor (WS) is restored.
- **551555558 – IR Low battery**
  - When the PIR Motion Detector (IR) is under Low Battery status, Green LED flashes every 2 sec with 2 beeps.
- **553555557 – IR Low battery Restore**
  - When the Low Battery status of PIR Motion Detector (IR) is restored.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

5.4. IC2020 Programming Command Table

DTMF CHARACTER COMMANDS	DTMF ACK	COMMAND OPERATION	TERMI-NATOR	DTMF ACK	DEFAULT
01#	Bi	Telephone number 1	#	Bi	1-888-852-3842
02#	Bi	Telephone number 2	#	Bi	1-888-852-4098
03#	Bi	Telephone number 3	#	Bi	1-866-271-5821
04#	Bi	Telephone number 4	#	Bi	No number
05#	Bi	Telephone number for alarm report	#	Bi	1
06#	Bi	Telephone number for status report	#	Bi	2
07#	Bi	Telephone number for Nurse Call	#	Bi	3
08#	Bi	Retry method, 0 = Alternative, 1 = One-by-One	#	Bi	Alternative
10#	Bi	Global account number, 4 to 6 digits	#	Bi	(please refer to the label on Control Panel)
11#	Bi	4-6 digits Account number 1 (Tel. Number 1)	#	Bi	No account number
12#	Bi	4-6 digits Account number 2 (Tel. Number 2)	#	Bi	No account number
13#	Bi	4-6 digits Account number 3 (Tel. Number 3)	#	Bi	No account number
14#	Bi	4-6 digits Account number 4 (Tel. Number 4)	#	Bi	No account number
20#	Bi	All formats the same, 0 = Contact ID, 1=Scancom, 2=Tunstall, 3=Voice, 4=Speech	#	Bi	Contact ID
21#	Bi	0 = Contact ID, 1= Scancom, 2 = Tunstall, 3 = Voice message playing, 4 = Speech (Tel. Number 1)	#	Bi	Contact ID
22#	Bi	0 = Contact ID, 1= Scancom, 2 = Tunstall, 3 = Voice message playing, 4 = Speech (Tel. Number 2)	#	Bi	Contact ID
23#	Bi	0 = Contact ID, 1= Scancom, 2 = Tunstall, 3 = Voice message playing, 4 = Speech (Tel. Number 3)	#	Bi	Speech
24#	Bi	0 = Contact ID, 1= Scancom, 2 = Tunstall, 3 = Voice message playing, 4 = Speech (Tel. Number 4)	#	Bi	Contact ID
31#	Bi	Ringer enable, 0 = Disable, 1 = Enable	#	Bi	Disabled
32#	Bi	Audible fault alert, 0 = Off, 1 = On	#	Bi	Off
33#	Bi	Help arrived signalling, 0 = Off, 1 = On	#	Bi	Help arrived signalling Off
34#	Bi	Emergency button enable 0 = Button off, 1 = Button on	#	Bi	Emergency button On
35#	Bi	Silent Mode 0 = Silent mode On, 1 = Silent mode Off	#	Bi	Silent mode Off
37#	Bi	AC fault report, 0 = Off, 1 = On	#	Bi	On
38#	Bi	Follow-On & Call Back Function, 0 = Follow-On, 1 = Call-Back, 2 = Follow-On & Call-Back	#	Bi	Follow-On
39#	Bi	Dialling Mode 0 = Tone, 1 = Pulse	#	Bi	Tone
40#	Bi	Set Access Code	#	Bi	1111

DTMF CHARACTER COMMANDS	DTMF ACK	COMMAND OPERATION	TERMI-NATOR	DTMF ACK	DEFAULT
41#	Bi	Auto answer for Remote programming, 00 = None, 01 - 32 = Auto answer 1 - 32 rings	#	Bi	20 rings
42#	Bi	Guard time delay 00 = Instant, - 99 = 99 seconds	#	Bi	5 seconds
43#	Bi	Test call, 0 = OFF, 1 = 1 day, 2 = 2 days, 3 = 3 days, 4 = 4 days, 5 = 5 days, 6 = 6 days, 7 = 7 days, 8 = 30 days	#	Bi	5 Days
44#	Bi	Mobility time 0 = Disable, 1 = 12 Hour, 2 = 24 Hour	#	Bi	Mobility time disable
45#	Bi	Follow-On Choice, 0 = Wait command, 1 = Listen, 2 = Two-way voice communication	#	Bi	Two-way voice communication
46#	Bi	Follow-On mode & Two-Way Period, 01=1 min, 02=2mins, 03=3mins, 04=4mins, 05=5mins, 06=6mins, 07=7mins, 08=8mins, 09=9mins, 10=10mins....up to 60=60mins	#	Bi	10 Minutes For Emergency Line
47#	Bi	Off-set time, 1=1 hour, 2=2 hours, 3=3 hours, 4=4 hours, 5=8hours, 6=12 hours	#	Bi	1 hour
49#	Bi	Supervision 0 = disable, 1 = 4 days, 2 = 5 days, 3 = 6 days, 4 = 7 days, 5 = 8 days, 6 = 9 days	#	Bi	4 days
50#	Bi	To record voice message	#	Bi	---
51#	Bi	To play voice message		Bi	---
52#	Bi	Panic mode enable / disable : 0 = Disable, 1 = Enable	#	Bi	Disable
53#	Bi	Line Failure Detection Voice Message 00=Disable, 01=1 min, 02=2 mins, 03=3mins, 04=4 mins, 05=5 mins, 06=6 mins, 07=7 mins, 08=8 mins, 09=9 mins, 10=10 mins....up to 60=60 mins	#	Bi	0
54#	Bi	Nurse Call out period, 01=1 min, 02=2mins, 03=3mins, 04=4mins, 05=5mins, 06=6mins, 07=7mins, 08=8mins, 09=9mins, 10=10mins....up to 60=60mins	#	Bi	60 Minutes For Nurse Line
80#	Bi	Remove all device (learnt in Command 91-94)	---	---	---
81#	Bi	Remove pendant #1 (learnt in Command 91)	---	---	---
82#	Bi	Remove pendant #2 (learnt in Command 92)	---	---	---
83#	Bi	Remove Silent Pendant (learnt in Command 93)	---	---	---
84#	Bi	Remove the Devices (learnt in Command 94)	---	---	---
91#	Bi	Learn-in pendant #1	---	Bi Bi	Pre-learnt IC2020TX
92#	Bi	Learn-in pendant #2	---	Bi Bi	No device
93#	Bi	Learns-in silent emergency transmitters	---	Bi Bi	No devices
94#	Bi	Learn-in smoke detectors, CO detectors, pendants and fixed emergency transmitters, long range pendants	---	Bi Bi	No device
98#	Bi	Load defaults when ∗∗ is pressed (DTMF A is heard after defaults have been loaded)	#	Bi	---
99#	Bi	Exit programming mode			---